

SOV/120-59-2-44/50

A Wide-band Amplifier for a Typical Oscillograph

There are 3 figures and 2 tables.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR
(Institute of Radio Engineering and Electronics,
Ac. Sc. USSR)

SUBMITTED: July 11, 1958

Card 3/3

AUTHOR: Prozorovskiy, Yu.N.

SOV/120-59-2-46/50

TITLE: Controlled Sine-wave Oscillator (Upravlyayemyy generator sinusoidal'nykh kolebaniy)

PERIODICAL: Pribery i tekhnika eksperimenta, 1959, Nr 2, p 147 (USSR)

ABSTRACT: The calibration of the repetitive scan of an oscillograph requires an oscillator whose oscillations may be initiated by an external synchronising pulse. In the circuit of Fig 1 the first valve is a 6P1P accepting negative pulses, amplifying and limiting them. The resulting standardised positive pulses are used to turn on the Hartley oscillator λ_2 using a 6P15P or 6P14P valve. The oscillation threshold may be adjusted by the position of the tap on the anode coil. The choke L_{p1} is universal wound with an internal diameter of 14 mm, width 4 mm and has 200 turns of PELShO 0.15. The choke L_{p2} consists of fifty turns of PEL 0.3 wound on a VS 0.5 watt 10 kilohm resistor. The filtering action of these coils extends from 0.1 to 100 mc/s. Fig 2 shows three oscillograms of a 10 mc/s

Card 1/2

Controlled Sine-wave oscillator

SOV/120-59-2-46/50

Card 2/2 wave with a repetition frequency of 3 kc/s on the
screen of a IO-4 oscillograph.
There are 2 figures.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR
(Institute of Radio Engineering and Electronics,
Ac.Sc. USSR)

SUBMITTED: May 13, 1958

SOV/108-13-8-7/12

AUTHOR: Prozorovskiy, Yu. N., Member of the Society

TITLE: Generator of Triangular Video Signals (Generator treugol'nykh videoimpul'sov)

PERIODICAL: Radiotekhnika, 1958, Vol. 13, Nr 8, pp. 47 - 49 (USSR)

ABSTRACT: The author gives a method for the production of triangular video signals by means of a forming double-pole, e.g. of a line section with a signal retardation time shorter than the leading edge pulse time of current and voltage supplied to the generator. A generator for short triangular video signals with electron tubes is described. It offers the possibility to work with high pulse repetition frequencies. The generator is constructed according to the diagram with a forming double-pole of second type. When using a pentode as current generator the front of the obtained current rise is linear only in the middle part. The beginning and the end are rounded off by the influence exerted by parasitic capacities. The influence of the upper rounding off can be removed by shortening the line and the transition to the

Card 1/2

Generator of Triangular Video Signals

SOV/108-13-8-7/12

triangular impulse. When then a bottom limiter is used an impulse of purely triangular shape is obtained. - The pulse obtained at the end of the output cable symmetric at both terminals has a triangular shape and a leading and trailing edge slope of $30\ 000\ \text{V}/\mu\ \text{sec}$. The pulse duration can be regulated from $(3\ \text{to}\ 19) \times 10^{-9}\ \text{sec}$ (measured at the 0,5-level of the highest) (at an amplitude of from 50 to 600 V). - In order to obtain sufficiently strong impulses valves of the generator type with increased anode potential must be used. There are 6 figures and 1 Soviet reference.

SUBMITTED: November 26, 1956

1. Video signals--Production
2. Signal generators--Performance
3. Signal generators--Equipment

Card 2/2

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S/120/60/000/03/043/055
EO41/E521

9.3260

AUTHOR: Prozorovskiy, Yu. N.

TITLE: Controlled Delay-Pulses Generator

PERIODICAL: Pribery i tekhnika eksperimenta, 1960, No 3,
pp 142-143

ABSTRACT: There are three output channels each with a "coarse" and "fine" delay adjustment and providing positive and negative pulses. There are four repetition frequencies, 1, 3, 10 and 30 kc/s. The circuit is in Fig 2. The first and second channels give delays up to 2 μ sec, the third up to 8 μ sec. The output pulses rise in 0.1 μ sec and fall in 2 μ sec with amplitudes of +120 and -140 V. The loads on the first two channels are each 510 ohms while that on the third is either 390 or 1000 ohms. S. V. Makeyev is thanked for his assistance. There are 2 figures.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR
Institute of Radio Engineering and Electronics, Ac.Sc.,
USSR)

SUBMITTED: April 29, 1959

Card 1/1

109-2-1-8/17

AUTHOR: Prozorovskiy, Yu. N.

TITLE: A Distributed-Constant Amplifier as a System of Multipole Networks
(Usilitel' s raspredelennymi postoyannymi kak sistema mnogopolyusnikov)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol 2, Nr 1, pp 57-64 (USSR)

ABSTRACT: A method of analysis is presented of a distributed-constant amplifier considered as a system of a finite number of multipoles. Matrices are obtained which connect input and output voltages and currents of a distributed-amplification stage comprising similar or dissimilar sections. Transmission constant of the amplifier is determined. Transformation of a VHF-pentode complete circuit into a multipole and corresponding matrices are presented. The existing theory of distributed amplification (references 1, 2, and others), which is based on presentation of an amplifier as two equivalent long lines formed by input and output tube capacitances and by additional coil inductances, has been experimentally corroborated only at relatively low frequencies. At frequencies close to the critical line-section frequency, the theoretical data does not agree well with experimental findings. The above theory does not

Card 1/3

109-2-1-8/17

A Distributed-Constant Amplifier as a System of Multipole Networks

allow for the entire effect of dissimilarity of the sections, or for the complex nature of the line terminations, etc. An attempt is made in the article to create a new method of analysis of the distributed-constant amplifier based on the general theory of linear electric circuits developed by E. V. Zelyakh (reference 3). An amplifier stage is broken up into five linear coupled type $2(p+1)$ multipoles, where $p=2$. The first and the last multipoles represent the losses in the anode and grid lines. The second and fourth multipoles represent the series inductances of the anode and grid lines. The third multipole represents the tube, its capacitances and also negative inductances of lines in case of m-type filter sections. It is assumed that the above pairs of multipoles are identical respectively. A-type matrices are derived for the above multipoles and also for the VHF pentode. The case of matching the first and last multipoles of the amplifier to external multipoles by means of m-type half-sections is also considered, and corresponding matrices are deduced. For deduction of the transmission factor, an amplifier stage with an autonomous input multipole (containing the source of voltage) and a non-autonomous output multipole

Card 2/3

109-2-1-8/17

A Distributed-Constant Amplifier as a System of Multipole Networks

(representing the termination) is examined. A set of matrix equations is solved and an expression for the transmission factor is obtained. For experimental verification of final formulas, an amplifier with three 6Zh1P tubes and type-K lines was built. Figure 7 represents the transmission factor depending on frequency determined from experiment (solid line) and from calculation (dotted line). The discrepancy between the two curves is due to the fact that the calculations did not allow for input admittances of the tubes and for losses in the lines. It is recommended that calculations for more complicated cases be made on an electronic computer.

There are 7 figures and 3 references, 2 of which are Soviet, in the article.

SUBMITTED: September 15, 1956

AVAILABLE: Library of Congress

1. Multiplex transmission--Equipment
2. Multiplex transmission--Theory
3. Multiplex transmission--Mathematical analysis

Card 3/3

109-2-1-16/17

AUTHOR: Prozorovskiy, Yu. N.

TITLE: Input Admittance of a Pentode. A Short Report
(O vkhodnoy provodimosti pentoda. Kratkoye soobshcheniye)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol 2, Nr 1, pp 121-123 (USSR)

ABSTRACT: The input admittance of a pentode has been considered without an allowance for a cathode-heater susceptance which has resulted in errors at frequencies in the range of hundreds mc. The author's measurements have shown that the cold-tube cathode-heater capacitance is 3-17 μf for metal and bantam tubes. Resonant frequencies of the circuit formed by the above capacitance and the cathode-lead inductance lie within 200-400 mc. This resonant circuit should be allowed for in cases involving frequencies of hundreds mc. A numerical example of a calculation of hot-tube admittance for a 6Zh1P pentode is presented. The following conclusions are reported: (1) The cathode-heater capacitance increases the input admittance of a tube and should be taken into consideration at frequencies above 10-15 mc. (2) The cold-tube input admittance has a capacitive nature and at frequencies over 100 mc, appreciably exceeds the low-

Card 1/2

109-2-1-16/17

Input Admittance of a Pentode. A Short Report

frequency input admittance. (3) Insertion of an additional inductance in the screen-grid circuit and lowering of the cathode-to-ground capacitance partially offset the increase of the input admittance at high frequencies.

There are 2 figures and 2 references, 1 of which is Soviet, in the article.

SUBMITTED: June 6, 1956

AVAILABLE: Library of Congress

1. Pentodes--Performance
2. Pentodes--Mathematical analysis

Card 2/2

PROZOROVSKIY, Yu. N.

Wide-band RC amplifiers. Radio no. 3:34-35 Ma '58.
(Amplifiers, Electron-tube)

(MIRA 11:3)

PROZOROVSKIY, Yu.N.

Method for analyzing amplifiers with distributed constants.
Radiotekh. i elektron 3 no.4:518-521 Ap '58. (MIRA 11:4)
(Amplifiers, Electron-tube)

PROZOROVSKIY, Yu.N.
LOMANOVICH, Viktor Aleksandrovich; PROZOROVSKIY, Yu.N., red.; LAKIONOV, G.Ye.,
tekhn.red.

[Amateur radio stations on frequency range of 144-146 and 420-425mc.]
Liubitel'skie radiostantsii na diapazon 144-146 i 420-425 Mgtz.
Moskva, Gos. energ. izd-vo, 1958. 47 p. (Massovaya radiobiblioteka,
no.288) (MIRA 11:4)

(Amateur radio stations)

107-5-53/54

AUTHOR: Prozorovskiy, Yu. (UA3AV)

TITLE: A Simple Narrow-Band Filter. Experience Exchange
(Prostoy uzkopolosnyy fil'tr. Obmen opytom)

PERIODICAL: Radio, 1956, Nr5, p. 63 col.1 (USSR)

ABSTRACT: A circuit consisting essentially of a cathode repeater (1 tube) and a narrow-band a-f amplifier (1 tube) designed for insertion into a radio receiver as a penultimate stage. It is claimed that the circuit weakens the signals of adjacent interfering stations.

There is 1 figure in the article.

AVAILABLE: Library of Congress

Card 1/1

Rezerovskiy, Yu. N.

AUTHOR: Prozorovskiy, Yu. N.

120-5-18/35

TITLE: High-speed Oscillograph CO-3 (Skorostnoy oscillograf SO-3)

PERIODICAL: Priroda i Tekhnika Eksperimenta, 1957 No. 5 ~~1953~~ - 76
(USSR)

ABSTRACT: By using a tube with travelling-wave deflection, transist-time distortion is very much reduced and the limiting frequency of an oscillograph raised from about 200 Mc/s to between 3 and 4 Gc/s. The examination of millimicrosecond pulses is also facilitated. The scan speed may be set within the limits $(2 \text{ to } 50) \times 10^{-9} \text{ sec./cm.}$ The oscillograph includes a pulse generator and delaying means by which the pulses originating from the apparatus may precede the scan by up to 1 μsec or be delayed upon it by up to 0.1 μsec . Fig. 1 shows photograph of the front of the oscillograph and Fig. 2 is a block diagram. Fig. 3 is the circuit, apart from power supplies, with component values. A calibration oscillator working at 100 Mc/s modulates the brightness of the electron beam. Fig. 4 shows an 0.1 μsec . pulse from a type 26-A generator. Figs. 5 and 6 show a 3.3 Gc/s pulse $5 \times 10^{-9} \text{ sec.}$ duration and 10 V peak-to-peak, taken by A.B. Dagekin. The travelling-wave deflection circuit is terminated in a 75 Ω coaxial resistance. The limits of card 1/2 deflection on the screen are $\pm 20 \text{ mm}$. The post-deflection

High-speed Cathilograph CO-3.

120-5-12/35

accelerator can operate up to 25 kV. In its absence, the sensitivity is 1 mm/V and with 10 kV it is 0.5 mm/V. The power consumption of the apparatus is 50 mA at 300 V. The tube was developed by NII LRTP. Two models have been constructed. The circuit contains 20 triodes and 2 pentodes. There are 8 figures.

ASSOCIATION: Institute of Radio-technology and Electronics Ac.Sc. USSR (Institut radiotekhniki i elektroniki AN SSSR)

SUBMITTED: March 8, 1957.

AVAILABLE: Library of Congress
Card 2/2

PROZOV, S.

Georgia-Armenia. Pozh. delo 4 no.2:12 F '58.

(MIRA 11:1)

(Georgia--Firemen) (Armenia--Firemen)

ACC NR: AP7007523 (A, N) SOURCE CODE: UR/0182/67/000/001/0001/0003

AUTHOR: Prozorov, L. V.

ORG: None

TITLE: Trends in the development of technology for production of large forgings

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 1, 1967, 1-3

TOPIC TAGS: metal forging, forging machinery, industrial automation, mechanical heat treatment, refractory metal

ABSTRACT: The author discusses the progress made in non-Soviet countries in working refractory alloys and other metals with relatively low ductility, and considers the problems which must be solved for increasing Soviet production of large forgings. It is pointed out that forging productivity can be increased only by automation, mechanization and development of new technological processes for producing blanks. Scientific research and design organizations in the Soviet Union today are devoting their main efforts to development of programmed control systems applicable to traditional forging methods. The author feels that more energy should be devoted to development of progressive technology which fits into the requirements of complex mechanization and automation. Some of the steps to be taken in achieving this goal are discussed and recommendations are made for improving the workability of refractory metals by mechanical

Card 1/2

ACC NR: AP7007523

heat treatment. Improvements in ingot production are suggested. It is pointed out that the production of forging blanks by the most progressive methods will require high-speed hydraulic presses with a capacity of 20-30 thousand tons. Orig. art. has: 1 table.

SUB CODE: 13/ SUBM DATE: None

Card 2/2

PROZOROV, A. P.

USSR/Chemistry - Corrosion-resistant materials

FT-1007

Card 1/1 Pub 50-11/19

Author : Prozorov, A. P., Nusinov, Ya. Ye., Shmelev, I. K.

Title : Antegemit of the grade ATM-1 as a substitute for lead

Periodical : Khim. prom., No 2, 103-108 (39-44), Mar 1955

Abstract : Found that Antegemit ATM-1 is a satisfactory material replacing lead in the construction of pipe coolers for the cooling of hot sulfuric acid at plants producing this acid. Furthermore, as distinguished from steel, artigemit pipes do not show any reduction of the heat transfer coefficient with time. Eleven figures.

PROZOROVA, Ye. I.

"The Embryogenesis of the Visceral Nervous Apparatus." Cand
Biol Sci, Saratov State U, Saratov, 1954. (RZhBiol, No. 4, Feb 55)

SO: Sum. No.631, 26 Aug 55-Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institu-
tions (14)

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20691

S/120/61/000/001/029/062
E194/E184

AUTHORS: Likhter, Ya.I., Prozumenshchikov, S.M., and
Sobolev, Ya.P.

TITLE: A Spectro-Analyser for Signals of Variable Frequency

PERIODICAL: Pribery i tekhnika eksperimenta, 1961, No.1, pp.96-98
(+ 1 plate)

TEXT: In analysing electro-magnetic signals of so-called
whistling atmospherics, which are of variable voltage and of
frequency which changes comparatively slowly (in 1-2 seconds the
frequency alters from 20 kc/s to 400 c/s). The principal
interest consists in establishing the relationship between the
instantaneous frequency of the signal and the time. Theoretical
considerations have shown that the instantaneous value of the
frequency f alters with time as follows:

$$f^{-\frac{1}{2}} = t/D \quad (1)$$

where D is a constant term, the dispersion, and t is reckoned
from some initial instant. The constant D depends on the
Card 1/3

20691

S/120/61/000/001/029/062

E194/E184

A Spectro-Analyser for Signals of Variable Frequency

properties of the medium in which the signal is propagated and on the geometric latitude of the observation point. The instrument that was developed was based on a low frequency spectro-analyser type ACH IX-1 (ASNChKh-1). The whistling atmospherics were recorded on a tape-recorder ring of magnetic tape. Thus a periodically repeating signal is provided for analysis. Modifications to the low frequency spectro-analyser are described. The scan is triggered by a light-beam passing through the magnetic tape at a place where the coating has been removed. Whilst the instrument is operating a scan of fifty horizontal lines appears on the cathode ray tube. The horizontal scan is the time axis and the vertical the frequency axis. Each line of the scan corresponds to adjustment of the spectrum analyser to a definite frequency and if this frequency appears at any instant of time a luminous spot appears at the corresponding place of the scan. At the next turn of the belt the analyser is tuned to a different frequency and the beam passes on to the next line of the scan showing another luminous point, and so on. A time scale is provided at intervals

Card 2/3

20691

S/120/61/000/001/029/062

E194/E184

A Spectro-Analyser for Signals of Variable Frequency

of 0.1 sec. The instrument has four frequency ranges, namely 0-4, 0-12, 0-6 and 0.20 kc/s, and correspondingly different values of transmission bandwidth of 100, 200, 300 and 400 c/s. The instrument can use magnetic tape rings of various lengths with recording times from 1.5 to 2.75 seconds. Records of a typical whistling atmospheric are shown. Determination of the dispersion is facilitated by plotting in non-linear coordinates in which Eq. (1) corresponds to straight lines at a slope of 1/D. The instrument makes this possible by providing a non-linear potentiometer and when this is used the analyser generator frequency alters according to a law of $\sim f^{-1}$ whilst the vertical scan is linear as before. Other laws can also be obtained. There are 2 figures and 1 English reference.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, the Ionosphere and Radio-wave Propagation, AS USSR)
Card 3/3
SUBMITTED: February 25, 1960

Amur Province-Pine

Protect the growth of pine on the Zavitinsk state farm. K. P. Solov'yev, L. T. Prokhorovskikh. Les i step' 4, no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952, 2Uncl.

SOLOV'YEV, K. P.; PROZUMENSHCHIKOVA, L. T.

USSR (600)

Pine - Amur Province

Protect the strip of pine on the Zavitskiy state farm. Les. i step' 4 no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

PROZUMENT, A.I.

Giant calculus of the urethra. Urologiia no.5:68-69 '62.

(MIRA 15:12)

1. Iz urologicheskogo otdeleniya (zav. - dotsent A.G. Bekkerman)

Moskovskoy gorodskoy bol'nitsy No.53

(CALCULI, URINARY)

12

Gasoline from cracked gas. L. Potolovskii and M. Prozumantik. *Azerbaidzhan'skie Neftyanoe Khimichesko* 1934, No. 1, (4) 2. The gasoline recovered from cracked gas from the Baku cracking units was analyzed by the Bodhielinski method and was found to contain: butane-butylenes 10, amylene-pentanes 20, hexane-hexylenes 12 and higher hydrocarbons about 58%. This gasoline could not be refined with acid and alkali, but mixed with 60% of naphtha it was refined properly. This gasoline should be absorbed with naphtha in the Badger unit; it is claimed that this will produce the desired stabilizing effect and will permit the customary treatment without appreciable losses. A. A. Bochtlingk

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

SECTION	SUBSECTION	CLASSIFICATION	REMARKS
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ca 72

Distillation of lubricating oils. R. Prozumenskiy, A. Kuchanovskiy, N. V. Kuchanovskiy. *Khimiya* 1930, No. 5, 83-7. -- In the distn. of lubricating oils, the max. permissible temp. is 265-70°. Vacuum distn. yields oils of better quality than atm. distn.

V. KUCHENSKY

ASO S.A. METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
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W

22

Experiments with a refinery distillation of the new Sarakhsanai crude oil. R.
PROZUMENITSE, *Azerbaizhanskoe Neftyanoe Khozylsho* 1930, No. 9, 123-3.- The
results are similar to those obtained by Gukhman and Plotko (preceding abstr.).
A. A. BOKHTLINGER

ASD 51-A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

2ND AND 4TH ORDERS

Distillation of motor oil fractions. K. LUKASINS AND R. PASTORIKS. *Tr. Vsesoyuznogo Nauchno-issledovatskogo Instituta Nefti i Khimii* 1930, No. 6, 110-2. Motor oils can be obtained from a single distn. of a mixt. of various crude oils. Such oils are much superior to the adulterated products and are in every respect comparable to the genuine oils. V. K.

ASD SIA METALLURGICAL LITERATURE CLASSIFICATION

122

PROPERTY AND PROPERTIES INDEX																									
1ST AND 2ND ORDERS													3RD AND 4TH ORDERS												
Co 22 Rectification properties of commercial lubricating-oil bubble towers. R. Proszumentik. <i>Azerbaidzhaniskoe Neftyanoe Khozyaistvo</i> 1934, No. 6, 73 D. The performances of the Foster-Wheeler, Alco and Badger bubble towers installed in various Russian refineries are compared. A. A. Bochtlingk																									
100-51-2 METALLURGICAL LITERATURE CLASSIFICATION 100-51-211-1 100-51-211-1 100-51-211-1 100-51-211-1 100-51-211-1																									

22

An attempt to prepare automobile oils by distillation. R. S. PROZUMENNIK AND K. P. LUKHOSHIN. *Repts. Lubr. Oil Comm.* (U. S. S. R.) 2, 158-61 (1932). Light Bibi-Eibat, Ramanni, Binagadui, Puta, heavy Bibi-Eibat and heavy Balakhaumi crude oils were mixed in various proportions and distilled. The properties of the lubricating oils are given. A. A. BOBHTLING.

ASD 514 METALLURGICAL LITERATURE CLASSIFICATION

PROCESSING AND PROPERTIES

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An attempt to prepare automobile oils by distillation. R. S. PROKUMENIK AND K. P. LUKHOMIN. *Repts. Lubr. Ind Comm. (U. S. S. R.)* 2, 158-61(1932). Light Bibi-Eibat, Ramanui, Binagudui, Puta, heavy Bibi-Eibat and heavy Halakhanui crude oils were mixed in various proportions and distd. The properties of the lubricating oils are given.

A. A. BORSHTEINIK

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS																											3RD AND 4TH ORDERS																																																																																																																																																																																								
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PROCESSES AND PROPERTIES INDEX																																																																																																																																																																																																																			
22 The first all-Russian conference on lubricating oils. R. S. Prozumentik and G. K. Izmailov. <i>Azerbaidzhan</i> <i>Neftyanoe Khozyaystvo</i> 1934, No. 3, 8-17.—A detailed description of the Alco lubricating-oil vacuum stills at Baku is given (the equipment is illustrated). The performance is discussed. The app. is operated with the injection of Na_2CO_3 or $\text{Ca}(\text{OH})_2$ for the neutralization of naphthenic acids. It is said that the equipment would be destroyed by corrosion within 4-5 years if the naphthenic acids were not removed. A. A. Bochtinok																																																																																																																																																																																																																			
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PROZUMENTOR, V.

Improving control over trade. Fin. SSSR 21 no.11:77-79 N '60.
(MIRA 13:11)

1. Starshiy inspektor sektora finansirovaniya narodnogo khozyaystva
Kishinevskogo gorfinotdela.
(Kishinev--Retail trade--Finance)

BRPIC, B.; CRNOVAC, H.; LESPOTOVIC, Lj.

Determination of the average ionizing radiation exposure of the personnel. Ark. hig. rada. 14:245-249 '63.

1. Institut za medicinska istrazivanja i medicinu rada, Zagreb.

IRP10, B.

Selection of the personnel for the industry utilizing ionizing radiations. Arh. hig. rada. 14:241-244 '63.

1. Institut za medicinska istraživanja i medicinu rada, Zagreb.

PRPIC, Branko, D... (Zagreb, Marije Turic Zagorka br. 8)
DeSPOTOVIC, Jerka, dr., CEROVAC, Hrvoje, dr.

Ionizing radiation in the industries of Croatia.
Tehnika Jug 18 no. 4: Suppl.: Organizacija rada 13 no. 4: 779-782
Ap '63.

1. Asistenti Instituta za medicinska istrazivanja i medicinu
rada, Zagreb.

*

PRPIC, Branko, dr.; SARIC, Marko, dr.; HARMUT, Magda

Evaluation of health control measures for subjects exposed to
ionizing radiations. Lijecn. vjesn. 85 no.2:179-182 '63.

1. Iz Instituta za medicinska istrazivanja i medicinu rada
Jugoslavenske akademije znanosti i umjetnosti u Zagrebu.
(RADIATION PROTECTION) (BLOOD CELL COUNT)

S

YUGOSLAVIA

Dr Branko PRPIC, Dr Marko SARIC and Magda HARMUT, Institute for Medical Research and Occupational Medicine of the Yugoslav Academy of Arts and Sciences (Institut za medicinska istrazivanja i medicinu rada JAZU [Jugoslavenska Akademija Znanosti i Umjetnosti], Zagreb.

"Evaluation of Data Obtained by Medical Control in Personnel Exposed to Ionizing Radiations."

Zagreb, Lijecknicki Vjesnik, Vol 85, No 2, 1963; pp 179-182.

Abstract [French summary modified]: Data on hemogram studies on 31 men and 19 women professionally exposed to x-radiation during the course of 2 years. Three tables; 1 Yugoslav and 5 Western references.

[1/1

LONGHINO, A.; PRPIC, I.

The problem of emergency surgical management of supracondylar fractures of the humerus in childhood. Acta chir. Iugosl. 8 no.3:211-216 '61.

1. Kirurski Klinika Medicinskog fakulteta u Zagrebu (Predstojnik prof. dr D.Juzbasic).
(HUMERUS fract & disloc)

PRPIC, I.

Management of colostomy patients. Acta chir. Jugosl. 10 no.3:
235-240 '63

1. Kirurska klinika Medicinskog fakulteta u Zagrebu ; Predstojnik:
prof.dr.D.Juzbasic.

5-

YUGOSLAVIA

PRPIC, Ivan, Dr; Department of Surgery, Medical Faculty, University of Zagreb (Kirurska Klinika Medicinskog fakulteta Univerziteta u Zagrebu), Zagreb.

"Surgical Treatment of Cutaneous Malignant Tumors"

Zagreb, Liječnicki Vjesnik, Vol 87, No 11, 1965, pp 1197-1206

Abstract: [Author's English summary modified] The author describes the problems of the surgical treatment of cutaneous epithelioma and skin melanomas. In the group of cutaneous epithelioma subjected to no previous treatment, surgery proved to have 2 percent recurrence. In the group of epithelioma subjected to previous treatment (i.e., recurrence of persistent lesions after radiotherapy), surgery had 10 percent recurrences. Skin melanomas show great variations in malignancy. Surgery is the only successful form of treatment, but the final results are poor, although melanomas of the skin are not invariably lethal. 9 Yugoslav, 13 Western references. Manuscript received 29 Jul 1965

PRPIC, Ivan, dr.

Critical evaluation of some of the most frequent errors in the treatment of burns. Vojnosanit. pregl. 19 no.4:277-299 Ap '62.

1. Medicinski fakultet u Zagrebu, Kirurska klinika.
(BURNS)

S

PRPIC, I., dr.

Injuries to soft tissues. Chir. maxillofac. 'Zagreb' 4 no.3:
137-151 '64.

JUZBASIC, Lj. PRILIC, Lj.

Use of corium in modern surgery. Acta chir. Iugosl. 11
no.1:1-18 O '64.

1. Kirurška klinika Medicinskog fakulteta u Zagrebu (Predstojnik
prof. dr L. Juzbasic).

YUGOSLAVIA

PRPIC, Ivan, Dr: Surgical Clinic, Medical Faculty, University of Zagreb (Kirurska klinika Medicinskog fakulteta u Zagrebu), Zagreb.

"Experimental and Clinical Application of Preserved Corium Graft"
Zagreb, Radovi medicinskog fakulteta u Zagrebu, Vol 13, No 2, 1965,
pp 115-140

Abstract [Author's English summary modified]: In the experimental work the author presents the problem of repair of large hernia and the defect of the thoracic and abdominal wall and of the diaphragm. The experiment was performed on five groups of dogs, and the author succeeded in preserving corium grafts by a 1:1000 mertiosal solution. Such grafts have been satisfactorily transplanted to dogs. The homostatic carium grafts were successfully used in clinical surgery for the repair of the defect of fascia lata and of large hernias. Pictures. 12 Yugoslav, 5 Eastern and 99 Western references. Manuscript received 2 Nov 1965.

PRPIC, Ivan, dr.

Plastic surgery in the treatment of wounds with skin defects. *Ležec.*
vjesn. 83 no.5:467-474 '61.

1. Iz Kirurske klinike Medicinskog fakulteta Sveucilista u Zagrebu.
(SKIN TRANSPLANTATION)

PRPIC, Ivan, Dr.

Treatment of contractures of the hand after burns. Voj.san.pregl.,
Beogr. 17 no.10:987-991 C '60.

1. Medicinski fakultet u Zagrebu, Kirurska klinika
(BURNS compl)
(HAND wds & inj)
(CONTRACTURE etiol)

PRPIC, Ivan, Dr.

First aid in recent burns. Lijec vjes 82 no.6:507-513 '60.

1. Iz Kirurske klinike Medicinskog fakulteta Sveucilista u Zagrebu
(BURNS ther)
(FIRST AID)

PRPIC, Ivan, dr.

Pathophysiological problems in surgery in old age. Liječn.
vjesn. 87 no.3:263-272 Mr ' 65.

1. Iz Kirurške klinike Medicinskog fakulteta Sveučilista u
Zagrebu.

PASINI, Miram, dr.; PRPIC, Ivan, dr.

Survival in deep burns in children. Lijec.vjes., Zagreb 82 no.1:
27-33 '60.

1. Iz Kirurske klinike Medicinskog fakulteta Sveucilista u
Zagrebu.

(BURNS in inf. & child)

VALECIC, Antun, Dr.; KALAFATIC, Zrnka, Dr.; PRPIC, Ivan, Dr.; VLATKOVIC,
Gojko, Dr.

Treatment of retained tests in children. Lijec vjes 82 no.9/10:
763-768 '60.

1. Iz Kirurske klinike i Klinike za dječje bolesti Medicinskog
fakulteta Sveucilista u Zagrebu.
(CRYPTORCHISM surg)

YUGOSLAVIA

MONTANI, Djordje; and PRPIC, Ivan, Surgical Clinic of Medical College
(Kirurška klinika Medicinskog fakulteta) Zagreb

"Use of Scarlet Red in the Treatment of Surface Skin Defects"

Zagreb, Liječnicki Vjesnik, Vol 88, No. 4, Apr 66; pp 403-407

Abstract: [English summary modified] In over 200 donor sites in over 100 patients treated over the last 3 years, epithelization followed application of scarlet red-impregnated dressing in 10 days in 95% of the cases; when dressings impregnated only with petrolatum were used, the earliest day of epithelization was day 14. 4 photographs of technic, 2 Yugoslav and 12 Western references. Manuscript received 20 Jan 66.

1/1

- 82 -

- 25 -

PRP10, 2.

The new fungicides and their use. Kemija. p. A13.

KEMIJA U INDUSTRIJI. (Društvo kemicara-tehnologa NHR) Zagreb, Yugoslavia,
Vol. 7, no. 4, Apr. 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 6,
June 1959.

Uncl.

YUGOSLAVIA / Chemical Technology. Chemical Products
and Their Applications. Pesticides.

H

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 12956.

Author : Prpic, Zdenka.

Inst : Not given.

Title : On New Fungicides and Their Use.

Orig Pub: Kemija u Industriji, 1958, 7, No 4, A-13 - A-14.

Abstract: No abstract.

Card 1/1

PRPIC-MAJIC, D.; BERITIC, T.

Clinical significance of magnesium. Liječn. vjesn. 83 no.2:176-181
'61.

(MAGNESIUM)

BERITIC, T.; PRPIC-MAJIC, Danica; MARK, B.; MARKICEVIC, Ana; VURDELJA,
Bosiljka

Pneumoconiosis caused by hard metal dust. Arh. hig. rada 14
no.4:261-268 '63.

1. Institut za medicinska istrazivanja i medicinu rada, Zavod
za radiologiju i Interna klinika Medicinskog fakulteta, Zagreb.

PRPIC-MAJIC, Danica; SARIC, M.; BERITIC, T.; KERSANC, Edita

Effect of various therapeutic doses of the EDTA complexon on clinical and laboratory symptoms of lead poisoning. Arh. hig. rada 13 no.1:29-43 '62.

1. Institut za medicinska istrazivanja i medicinu rada, Zagreb.
(LEAD POISONING) (EDATHAMIL)

S

YUGOSLAVIA

M. SARIC, Danica PRPIC-MAJIC, Zdenka CUDINA-NIKSIC, Institute for Medical Research and Occupational Medicine (Institut za medicinska istrazivanja i medicinu rada i Dom narodnog zdravlja), Zagreb.

"Activity of Serum Transaminase in Occupational Exposure to Trichlorethylene."

Zagreb, Arhiv za Higijenu Rada i Toksikologiju, Vol 13, No 3, 1962; pp 183-188.

Abstract [English summary modified]: SGPT values were slightly above norm in 20 workers exposed to trichlorethylene; they were consistently increased to an even higher level at the end of the working day, suggesting definite subclinical hepatotoxicity due to occupational exposure to the compound. Daily rise was statistically significant (0.05.) SGOT was close to norm. Exposure was also confirmed by determination of trichloroacetic acid in urine: up to 736 mg./L.; lowest was 26 (a foreman.) Three tables; 12 Western and 2 Yugoslav references.

1/1

SARIC, M.; PRPIC-MAJIC, Danica

Toxic methemoglobinemia in aniline dye industry. Arh hig rada 11
no.1:53-60 '60.

1. Institut za medicinska istrazivanja i medicinu rada, Zagreb.

(METHEMOGLOBINEMIA etiol)
(ANILINE COMPOUNDS toxicol)
(OCCUPATIONAL DISEASES)

SARIC, M.; PRPIC-MAJIC, Danica

A case of occupational nitrobenzene poisoning. Arh hig rada 11 no.2:
141-145 '60.

1. Institut za medicinska istrazivanja i medicinu rada, Zagreb.

(NITROBENZENES toxicol) (OCCUPATIONAL DISEASES)

SARIC, M.; PRPIC-MIJIC, Danica; BERITIC, T.

Activity of serum transaminase in workers exposed to carbon tetrachloride.
Arh. hig. rada 13 no.1:19-27 '62.

1. Institut za medicinska intrazivanja i medicinu rada, Zagreb.
(AMINOTRANSFERASES) (CARBON TETRACHLORIDE POISONING)

SARIC, M.; PRPIC-MAJIC, Danica; CUDINA-NIKSIC, Zdenka

Serum transaminase activity in occupational exposure to trichloroethylene.
Arh. hig. rada 13 no.3:183-188 '62.

1. Institut za medicinska istrazivanja i medicinu rada i Dom narodnog
zdravlja "Pescenica", Zagreb.
(AMINOTRANSFERASES) (TRICHLOROETHYLENE)
(OCCUPATIONAL DISEASES)

5

FPOIDA, F. A.

FPOIDA, F. A. "Sm t of Cereals," Sbotnik Vsesoiuznogo Instituta Zashchity Rastenii,
no. 2, 1932, pp. 45-49. 464.9 L542

So: Sira SL-90-53, 15 Dec 1953

PEROV, V.

Automatic Stopping Device for the Card for the Case of Thickening
of the Carded Fleece of the Feeding Roller. Leka Promishlenost (Light
Industry), #5:12:May 55

Prsa, A.

Influence of the Danube on the geographical distribution of some Amphibia. p. 63

CROATICA CHEMICA ACTA. (Hrvatsko kemijsko drustvo, Sveuciliste u Zagrebu i
Hrvatsko prirodoslovno drustvo) Zagreb, Yugoslavia. Vol. 7, no. 14, 1958

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959

Uncl.

References

"Contribution to the study of the biology of fish fauna in Pitvice Lakes.
p. 76, (Zbornik, Obitelj Pitvice, Zbornik, Vol. 9, No. 4, 1953, Nova Sad,
Yugoslavia)

SC: Monthly List of East European Accessions, (LSC), IC, Vol. 4, No. 4,
Apr 1953, Incl.

PRSA, M.

The cyclical development of biotypes of *Azobacters* isolated from terra rossa of Istria. Bul sc Youg 8 no.3/4:89 Je-Ag'63.

1. Poljoprivredno-sumarski fakultet, Zagreb.

WOLF, A.; HIAVACOVA, M.; PRSKAVCOVA, V.; MARESOVA, P.

Changes in food stuffs under the influence of ionizing radiations.
J. Hyg. Epidemiol., Praha 1 no.2:156-162 1957.

1. Institute of Hygiene, Prague.

(ROENTGEN RAYS, eff.

on nutritive value & microbiol. of food stuffs)

(FOOD, eff. of radiations on

x-rays, on nutritive value & microbiol. of food stuffs)

L 36432-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EPR/EPA(w)-2/EPA(bb)-2/EWP(t)/EWP(b)

ACCESSION NR: AR5005682 Pab-10/Pr-4 S/0276/64/000/008/B091/B092 EPF(n)-2

Ps-4/Pt-10/Pu-4 JD/WW/WH

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 8B571

AUTHOR: Prshedromirskaya, Ye. M.

TITLE: Gas flame vaporization of silicate materials

CITED SOURCE: Tr. Kiyevsk. politekhn. in-ta, y. 43, 1963, 63-66

TOPIC TAGS: glass enamel, gas flame coating, spray procedure, silicate vaporization

TRANSLATION: The results of tests carried out with the UPN-6-61 unit, designed by the VNII Avtogen (All-Union Research Institute for Gas Welding), to determine conditions for gas flame vaporization which would insure high quality of coatings are reported. The following process factors were found optimal: effective oxygen pressure at injector 5 kg/cm², effective oxygen pressure at powder feed 0.4 kg/cm², effective acetylene pressure 0.6 kg/cm², distance from gun to sprayed surface 100 mm, powder particle size not larger than 0.1 mm, coating efficiency 85%. It is noted that gas flame spraying of glass enamels requires the proper selection of

Card 1/2

I-36432-65

ACCESSION NR: AR5005682

techniques used in preheating and cooling the sprayed surface.

SUB CODE: MT, MM, IE

ENCL: 00

Card 2/2

L 41677-65 EPA(s)-2/EWT(m)/EPF(c)/EWP(1)/EPF(n)-2/EWP(v)/EPR/EPAN(1)-2/EPAN(2)/
EWP(t)/EWP(k)/EPA(bb)-2/EWP(b)/EWA(c) Pab-10/Pf-4/Pr-4/PS-4/Pt-7/Pu-4 JD/
ACCESSION NR: AT5006148 WH/HM/WH S/3140/63/043/000/0067/0071

AUTHOR: Prshedromirskaya, Ye. M. (Aspirant of chemico-technological faculty) 76
B+1

TITLE: The plasma arc process of applying coatings 5

SOURCE: Kiyev. Politekhnikheskiy institut. Trudy, v. 43, 1963. Sbornik nauchnykh
rabot aspirantov khimiko-tekhnologicheskogo fakul'teta, 67-71

TOPIC TAGS: plasma arc, gas discharge plasma, plasma jet

ABSTRACT: The author describes his attempts to use the plasma arc process of
applying coatings on a metal surface. The materials used for the coatings were
Al₂O₃ powder and ZrO₂ powder stabilized with 5% CaO. The principal factors which
determine the effectiveness of the plasma coating process are electric power, arc
gas consumption, and the distance of the plasma burner from the workpiece. The
author indicates the need for further research to investigate the application of
thin films of ceramic dielectrics and semiconductor materials. Orig. art. has: 2
figures, 2 tables. 15

ASSOCIATION: none

Card 1/2

L 41677-65

ACCESSION NR: AT5006148

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, MT

NO REF SOV: 001

OTHER: 005

me
Card 2/2

L 24130-66 EWP(e)/EWT(m)/T/EWP(t) IJP(c) JD/JG/WH

ACC NR: AP6011350

SOURCE CODE: UR/0226/66/000/003/0084/0087

AUTHOR: Prshedromirskaya, Ye. M.; Kukota, Yu. P.; Sleptsov, V. M.

ORG: Institute for Problems of Materials Science, Academy of Sciences UkrSSR (Institut problem materialovedeniya AN USSR); Institute of Technical Thermophysics, Academy of Sciences UkrSSR (Institut tekhnicheskoy teplofiziki, AN USSR)

TITLE: Strength characteristics of porous materials made of refractory compounds

SOURCE: Poroshkovaya metallurgiya, no. 3, 1966, 84-87

TOPIC TAGS: titanium carbide, titanium boride, compressive strength, bending strength, sintering, porous material

ABSTRACT: The purpose of this work was to investigate the limits of compressive strength and bending of some porous refractory compounds. The samples for compression tests were prepared in the form of cylinders measuring 8 mm in diameter and 12 mm in height, while the samples for bend tests were parallelepipeds, measuring 7 x 7 x 7 mm. TiC, VC, Cr₃C₂, ZrC, TiB₂, and ZrB₂ powders were used as initial materials. The compression and bend tests were conducted to rupture on a TsD-4 hydraulic press. The test data obtained show good correlation with the Ryshkevich curve, which can be approximated by an

Card 1/2

L 24130-00

ACC NR: AP6011350

equation as $\sigma = \sigma_0 e^{-BP}$, where σ is the compression strength of a porous material, σ_0 is the compression strength of a nonporous material, P is the porosity expressed in fractions, B is the numerical coefficient; usually $B = 7$ for experimental data for the majority of porous materials (Ye. Ryshkevich. Compression strength of porous sintered alumina and zirconia, J. Amer. Ceram. Soc., 36, 65, 1953). The dependence of relative strength on porosity during compression for titanium, chromium, and tungsten carbides as well as titanium and zirconium borides of the 75 -- 85% fraction can be expressed by the formula $\frac{\sigma}{\sigma_0} = e^{-7P}$. There is no corresponding formula for bending tests. The relationship between the strength characteristics of the specimen and the granulometric composition of the initial powders has been established. It has been found that activated sintering of porous parts increases the strength of the parts while the porosity remains the same. Orig. art. has: 2 figures and 2 tables. [AM]

SUB CODE: 11/ SUBM DATE: 06Oct65/ ORIG REF: 005/ OTH REF: 002/

Card 2/2 *AM*

ACC NR:AP7004393

(N)

SOURCE CODE: UR/0226/67/000/001/0027/0030

AUTHOR: Prshedromirskaya, Ye. M.; Sleptsov, V. M.; Vitryanyuk, V. K.; Kukota, Yu. P.

ORG: Institute of Problems of the Science of Materials, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Investigation of the penetrability of porous materials from refractory compounds

SOURCE: Poroshkovaya metallurgiya, no. 1, 1967, 27-30

TOPIC TAGS: refractory compound, spheric METAL POWDER, POWDER METAL SINTERING, porous material, material penetrability, POROSITY, GAS ABSORPTION, TITANIUM CARBIDE, TUNGSTEN CARBIDE, ZIRCONIUM CARBIDE

ABSTRACT: The effect of the granulometric composition on the gas penetrability of porous TiC, WC, ZrC, TiB₂ and ZrB₂ parts sintered from spheroidized powders has been investigated in the range of air delivery and pressure drop, which ensured a linear filtration. The particle size was found to affect significantly the gas penetrability of sintered porous materials. For example, increasing particle size from 60 to 600 μ increased the penetrability of sintered parts with the same porosity by 5-10 times. In powders of comparable particle size, those with a higher porosity have a higher gas penetrability. The kind of material had a negligible effect on the gas penetrability of sintered parts. The dependence of the penetrability coefficient (K) on the porosity (P) and particle diameter (D) is approximated by the formula:

Card 1/2

UDC: none

ACC NR: AP7004393

$$K = \frac{D^2 + 0.06}{4.4 + 0.072P} \cdot 10^{-11}.$$

The formula is satisfactory for porous materials with a porosity of 25—55% sintered from spheroidized TiC, WC, Zr, TiB₂ and ZrB₂. For processes associated with mass transfer, in addition to knowledge of the total porosity of a material, it is necessary to know the amount and distribution of open pores. The distribution of pores according to dimensions was investigated at a laboratory of the Institute of Electrochemistry under the direction of Dr. of Chemical Sciences R. Kh. Burshteyn. The radii of pores in the 100—7 μ range were measured using a vacuum unit at a pressure of 40—700 mm Hg, and in the 7—0.01 μ range at a pressure of 1—801 atu. The test specimens were prepared from spheroidized WC particles. The obtained results were practically identical with those obtained by hydrostatic weighing. The plotted integral and differential curves for the pores' distribution according to dimensions showed that the structure of porous materials from spheroidized powders of refractory metals is sufficiently homogeneous, and that the pore dimensions are determined mainly by the dimensions of the initial particles and the packing method. Orig. art. has 4 figures and 1 table.

[MS]

SUB CODE: 11/ SUBM DATE: 26May66/ ORIG REF: 008/ ATD PRESS: 5116

Card 2/2

L 23587-66 EWP(e)/EWT(m)/ETC(f)/EWG(m)/T/EWP(t) IJP(c) JD/JW/HW/JG/AT/WH
ACC NR: AP6012768 SOURCE CODE: UR/0226/66/000/004/0011/0015

AUTHOR: Prshedromirskaya, Ye. M.; Sleptsov, V. M. 76
13

ORG: The Institute of Materials Science Problems, Academy of Sciences UkrSSR (Institut problem materialovedeniya AN USSR)

TITLE: Sintering of porous parts from refractory compounds

SOURCE: ¹⁸ Poroshkovaya metallurgiya, no. 4, 1966, 11-15 ²⁷

TOPIC TAGS: porous metal, refractory metal, activation, sintered metal, filler

ABSTRACT: The author presents the results of an investigation of the processes of sintering some porous materials from carbides and borides of refractory metals (TiC, WC, ZrB₂, TiB₂). The kinetics of activated sintering of titanium carbide of the fraction 177 -- 420 μ is studied. The values of the activation energy of titanium carbide with additions of cobalt chloride and without it are computed. It is established that introducing fillers makes it possible to raise the porosity of the parts. Orig. art has: 5 figures, 5 formulas, and 1 table. [Based on author's abstract] [AM]

SUB CODE: 11,13/ SUBM DATE: 22Oct65/ ORIG REF: 011/ OTH REF: 001/

Card 1/1 BK 2

L 1304-66 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/ETC/EPF(h)-2/EWG(m)/EWP(v)/EWP(t)/
EPA(w)-2/EWP(j)/T/EWP(k)/EWP(z)/EWP(b) IJP(c)

ACCESSION NR: AP5022340 DS/JD/WW/JG/AT/RM/ UR/0226/65/000/009/0011/0018

AUTHOR: Sleptsov, V. M.; Prshedromirskaya, Ye. M.; Kukots, Yu. P.

TITLE: Production and properties of the spheric powders of refractory compounds

SOURCE: Poroshkovaya metallurgiya, no. 9, 1965, 11-18

TOPIC TAGS: spheroidization, refractory compound, spheric metal powder, powder metal sintering, fuel cell, plasma jet

ABSTRACT: Porous cermets made of spheric powders are used in the fabrication of electrodes and diaphragms for chemical industry as well as catalysts and catalyst carriers. They have made it possible to develop effective models of devices for direct conversion of heat to electrical energy ("fuel cells") and recently studies of the use of porous tungsten for the ionization of alkali metals in the ion engines of space rockets have appeared. In this connection the authors describe the techniques and means of obtaining spherical particles of certain refractory materials as well as the properties of the obtained powders. Spheric powders can be prepared by granulating fine-disperse powders with a binder (solution of polyvinyl alcohol or synthetic rubber in gasoline, in which the fine-

Card 1/3

L 1304-66

ACCESSION NR: AP5022540

9

disperse powder of refractory compounds is stirred until it acquires a creamy consistency). The granulation itself is performed by means of techniques used in the production of hard alloys (pelletization via a mesh), and it is followed by sintering of the granules. In some cases where fusion of particles of refractory metals and their compounds is required, sintering may be replaced with fusion in a plasma jet. The bulk weight and shake-down weight of the spheric particles of the carbides and borides of high-melting metals are low. Flowage of spheroidized carbide powders is much higher than in the analogous boride powders; the flowage of CrB is particularly low. The state of the surface (unit surface area) is roughly the same in both borides and carbides. A determination of the density of sintered spheric powders of refractory compounds showed that, following the sintering of the particles, their residual porosity is approximately 8-18%. The least porosity (2-3%) is displayed by granulated and sintered particles of Cr_3C_2 . Orig. art. has: 6 figures, 5 tables.

ASSOCIATION: Institut problem materialovedeniya AN USSR (Institute for the Study of Materials AN UkrSSR); Institut tekhnicheskoy tepl. fiziki AN USSR (Institute of Technical Heat Physics AN UkrSSR)

44,55

Card 2/3

L 1304-66

ACCESSION NR: AP5022540

SUBMITTED: 03Feb65

ENCL: 00

SUB CODE: MM

NO REF SOV: 011

OTHER: 002

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L 7060-66 EWP(e)/EWT(m)/EPF(c)/EWP(i)/ETC/EWG(m)/EWP(t)/EWP(k)/EWP(z)/EWP(b)

ACC NR: AP5026277 IJP(c) JD/WW/JG/AT/WH SOURCE CODE: UR/0226/65/000/010/0085/0090

AUTHOR: Sleptsov, V. M.; Prshedromirskaya, Ye. M.; Kukota, Yu. P.

ORG: Institute of the Problems of the Science of Materials, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Porous materials from carbides and borides of transition metals

SOURCE: Poroshkovaya metallurgiya, no. 10, 1965, 85-90

TOPIC TAGS: refractory compound, refractory compound filter, filter, powder metallurgy, refractory metal carbide, refractory metal boride, carbide powder, boride powder, sintered metal porosity, sintered metal permeability

ABSTRACT: The methods of manufacturing porous materials from spherical powders of refractory compounds Cr_3C_2 , $(\text{TiCr})\text{B}_2$, ZrB_2 , and TiC and some properties of sintered materials are described. To obtain materials with a maximum porosity and permeability, spherical powders activated in a solution of cobalt or nickel chloride were loosely poured into graphite molds and sintered for 30-240 min at a temperature of $0.7-0.95 T_{\text{mel}}$ of the respective compounds. The porosity and strength characteristics of sintered materials depended substantially on the sintering temperature. Materials and parts with a given porosity can be made expeditiously by compacting powders at a pressure of $25 \cdot 10^5 - 15 \cdot 10^7 \text{ n/m}^2$ and sintering at optimum temperatures. The final porosity of sintered materials varied from 26.4 to 48.6% and more and strongly de-

Card 1/2

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ACC NR: AP5026277

pended on the compacting pressure, sintering temperature, powder grain size, and compounds used. The optimum temperature and duration of sintering parts with a maximum porosity and satisfactory strength were 1400C for 60 min for Cr_3C_2 powder, 2000C for 30 min for $(\text{TiCr})\text{B}_2$ and ZrB_2 powders, and 2300C for 60 min for TiC powder. Permeability tests conducted with nitrogen at temperatures up to 1100C showed that the permeability of sintered materials decreased with increasing thickness of the specimens and, particularly, with increasing temperature. Orig. art. has: 6 figures and 1 table. [MS]

SUB CODE: 11, 13/ SUBM DATE: 12Mar65/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS:

4144

BC
Card 2/2

SEETNOV, V.M. ; PRSHEDROMIRSKAYA, Ye.M.; KUZOTA, Yu.P.

Porous materials of transition metal carbides and borides.
Porosh. mat. 5 no.10:85-90 0 '65. (MIRA 18:11)

1. Institut problem materialovedeniya AN UkrSSR.

KUKOTA, Yu.P.; PRSHEDROMIRSKAYA, Ye.M.; SLEPTSOV, V.M.

Permeability to gas of porous materials made of high-melting compounds. Report No.3. Porosh.met. 5 no.11:32-40 N '65.

(MIRA 18:12)

1. Institut problem materialovedeniya AN UkrSSR i Institut tekhnicheskoy teplofiziki AN UkrSSR. Submitted January 6, 1965.

SAMSONOV, G. V.; SLEPTSOV, V. M.; KRASNOV, A. N.; FRSHEDROMIRSKAYA, Ye. M.

"Methoden zur erzeugung kugeliger teilchen hochschmelzender metalle under verbindungen."

report submitted for 3rd Intl. Conf on Powder Metallurgy, Eisenach, E. Germany, 13-15
May 1965.
Kiev, UkSSR.

L 35033-65 EWT(1)/EWT(m)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EWP(t)/EWP(b)/EWA(m)-24 Po-4/
 ACCESSION NR: AR5005679 Pz-6/Pab-10/Pi-6/0276/64/000/008/B078/B078 IJP(c) AI/JD

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 8B464 46 B

AUTHOR: Prshedromirskaya, Ye. M.

TITLE: Arc plasma coating 16

CITED SOURCE: Tr. Kiyevsk. politekhn. in-ta, v. 43, 1963, 67-71

TOPIC TAGS: plasma coating, process factor selection 21

TRANSLATION: The results of studies carried out to determine basic factors (current intensity, arc gas flow rate, distance from plasma burner to coated article) governing the effectiveness of the plasma coating process are presented. A current density of 200-250 amps., operating voltage of 40-45 v, gas flow rate of 1.8 m³/hr, nozzle distance of 60-70 mm and deposited particle size not in excess of 50 μ were determined to be optimal. The unit's design is illustrated. Bibl. with 6 titles; 2 illustrations and 2 tables.

SUB CODE: IE

ENCL: 00

Card 1/1

ACC NR: AP6009573 (A)

SOURCE CODE: UR/0226/65/000/011/0032/0040

80
66
B

AUTHOR: Kukota, Yu. P.; Prshedromirskaya, Ye. M.; Sleptsov, V. M.

ORG: Institute for the Study of Materials, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR); Institute of Heat Physics Engineering, AN UkrSSR (Institut tekhnicheskoy teplofiziki AN UkrSSR)

TITLE: Gas permeability of porous materials made of refractory compounds

SOURCE: Poroshkovaya metallurgiya, no. 11, 1965, 32-40

TOPIC TAGS: stainless steel, reductor, gas permeability, permeability measurement, powder metallurgy, refractory compound, boride, carbide / Kh23N18 stainless steel, RS-250-58 reductor

ABSTRACT: In connection with the development of the porous cooling method, based on the blowing of gas through a porous wall to protect the wall against contact with the principal flow of hot gas and to reduce heat transfer and friction, and since the design and calculation of porous cooling systems require knowledge of hydraulic characteristics of the porous material, the authors describe an experimental investigation of the hydraulic characteristics of pressed spe-

Card 1/3

ACC NR: AP6009573

specimens of the borides (Ti, Cr) B₂ and ZrB₂ and carbides WC, TiC, prepared from granulated powders (two mesh sizes: 50-75 and 75-100 μ), performed with the aid of the experimental setup shown in Fig. 1. The setup consists of a series of compressed-air cylinders 1, RS-250-58

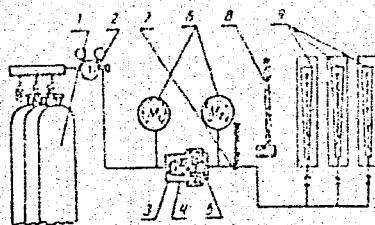


Fig. 1. Diagram of setup for investigating the permeability of porous materials:

- 1 - array of compressed-air cylinders; 2 - reducer; 3 - test specimen;
- 4 - rubber collar; 5 - cone-shaped steel yoke; 6 - standard MZM manometers;
- 7 - mercury thermometer; 8 - barometer; 9 - battery of RS-7, RS-5, RS-3 rotameters

Card 2/3

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ACC NR: AP6009573

reductor 2, clamp 4, 5 for gripping the tested specimen 3, and measuring instruments 6-9. Compressed air is blown through the specimen and gas permeability of the specimen is measured as a function of the pressure gradient. It is found that TiC and ZrB₂ display a gas permeability that is inferior to that of WC and (Ti, Cr) B₂. The best permeability was displayed by the specimens of specially prepared porous stainless steel Kh23N18 that were investigated for comparison. It is shown that the experimental findings are in good agreement with theoretical formulas. Further, these findings indicate the presence of deviations from Darcy's law of linear dependence; hence, hydraulic characteristics cannot be expressed by the permeability coefficient alone; allowance must be also made for the coefficients of viscosity and inertial resistance (as a function of porosity of the material). Orig. art. has: 16 formulas, 1 table, 7 figures.

SUB CODE: 11, 20, 13/ SUBM DATE: 06Jan65/ ORIG REF: 008/ OTH REF: 002

Card 3/3

111 AND 112 442121

PROCEDURES AND PROPERTIES INDEX

116 AND 117 442121

4-3

Determination of sulphosulphuric acid. K. P. KUMARASWAMI and V. P. KUMARASWAMI (Trans. Inst. Pure Chem. Res., 1981, 20, 8).—The free H_2SO_4 is determined by BaCl_2 in the usual manner, and the total SO_4^{2-} after oxidizing with KMnO_4 .

E. S. HEDGECOCK.

ASM-S.A. METALLURGICAL LITERATURE CLASSIFICATION

111 AND 112 442121

116 AND 117 442121

1ST AND 2ND GROUPS																										3RD AND 4TH GROUPS																									
PROCESSES AND PROPERTIES INDEX																										METALLURGICAL LITERATURE CLASSIFICATION																									
29 A.F. PRSHELOVA Synthetic tanning agents. P. S. Konovalenko, A. P. Polchubina, and M. I. Khodak. USSR, 65,617, Feb. 11, 1946. Phenol is condensed with methylene in a to the presence of H_2SO_4 of such concentration that the phenol is not sulfonated. The condensation product is then isolated until it becomes water-soluble. The sulfonated product is partially or wholly neutralized. M. Ito, Jr.																																																			

VAVREYN, V.[Vavrejn, V.]; PRSHEROVSKI, I.[Prerovsky, I.]; LINGART, I.
[Linhart, I.]

Tissue clearance in the varicose syndrome. Eksper. khir. no.3:
49-52 '62. (MIRA 15:7)

1. Iz Instituta klinicheskoy i eksperimental'noy khirurgii
(dir. - prof. Shpachek) i Instituta bolezney krovoobrashcheniya
(dir. - akad. K. Veber), Praga.

(VARIX) (IODINE--ISOTOPES)

1ST AND 2ND COPIES		PROCESSES AND PROPERTIES INDEX	3RD AND 4TH COPIES
8C	Standard, for, and standard methods of analyzing, sulphuric, hydrofluoric, and nitric acids. E. S. Kuznetsov, A. V. Focur, and T. N. Kuznetsov. (Zhurnal Khim. Fiz. U.S.S.R., 1981, No. 12, 48-50). Note: Limits are given for the proportions of the different impurities allowed in "pure," "chemically pure," and "pure for analysis" H_2SO_4, HCl, and HNO_3. Methods are given for the determination of the impurities, and the results of analysis of many brands of each acid. In HCl 0.0005% and in HNO_3 0.0004% of SO_4^{2-} in HNO_3 0.0005% and in H_2SO_4 0.0001% of Cl^- are detectable. For detecting HNO_3 in H_2SO_4, the NH_4F reaction as described by Trumbull is suitable; for small proportions, the $FeSO_4$ reaction is better. Determination of Fe by the thiocyanate method is more sensitive in presence of amyl alcohol. By Eide's modification of the Oustath method, 0.00005% As may be detected in acids. T. H. Forn.	1-1	
			ASS-15A METALLURGICAL LITERATURE CLASSIFICATION
FROM SYNDICATE	100000 HEP DIV 501	RELATION	FROM SYNDICATE
100000 HEP DIV 501	RELATION	100000 HEP DIV 501	RELATION

17. AND 17M CODES		PROCESSING AND PROPERTIES INDEX		18D AND 17M CODES	
BC				B-II-1	
Determination of purity of acetic anhydride. N. I. TARASHEVICH and E. S. PRONIALSKI (Zavod. Lab., 1936, 5, 1455—1460).—Rosenbaum and Wal- ton's method (A., 1930, 1270) is recommended. R. T.					
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION					
18000 17100117		18000 17100117		18000 17100117	
18000 17100117		18000 17100117		18000 17100117	

BC

B-1-8

Determination of chlorine in potassium iodide.
V. M. Pashanova and E. G. Pashovatski (J. Gen. Chem.
Russ., 1933, 3, 519-522).—5 c.c. of conc. H_2SO_4 ,
2-5 c.c. of 5% $KMnO_4$, and 1 c.c. of 30% H_2O_2 are added
to 0.5 g. of KI in 50 c.c. of H_2O , the solution is filtered,
and I in the filtrate and washings is removed by
extraction with CH_2Cl_2 . Aq. $AgNO_3$ is added to the aq.
solution, and $AgCl$ is determined nephelometrically.
R. T.

ASSOCIATE METALLURGICAL LITERATURE CLASSIFICATION